UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MEMORANDUM

Subject: **4-Chlorophenoxyacetic Acid (4-CPA) TRED**: Estimated Drinking Water Concentrations for 4-CPA for Use in the Human Health Drinking Water Risk Assessment. (Chemical Code 019401 ; DP Barcode D284988)

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This memorandum transmits the FQPA drinking water assessment for the tolerance reassessment of 4-CPA. The use of 4-CPA is limited to indoor use as a root suppression agent for mung bean sprouts and therefore the agency only required the submission of hydrolysis data in support of the registration of 4-CPA. No drinking water assessment has been completed at this time for 4-CPA since an indoor use is expected to minimally impact drinking water sources.

Environmental Fate Assessment

Hydrolysis data were the only data required to support the indoor use (e.g. root suppression of mung bean sprouts) of 4-CPA. From an acceptable study, parent 4-CPA was stable with a reported half life of greater than 30 days to abiotic hydrolysis in three buffer solutions (MRID 42819601). No additional environmental fate data are required to support the use of 4-CPA on mung beans.

4-CPA is expected to be mobile in soil and aquatic environments because it will exist as an anion (dissociated carboxylic acid) in most environments. The soil partitioning coefficient (Kd) for 4-

CPA cannot be estimated from structural analysis. Disposal of 4-CPA treated water, after treatment of mung beans, should be performed in compliance with all appropriate discharge permits and requirements. By analogy, the phenoxy herbicides as a class are generally degraded under aerobic conditions by microbially mediated processes and aqueous photolysis, and are generally stable to hydrolysis, soil photolysis, and under anaerobic conditions.

Conclusions

No estimated exposure concentrations for drinking water are presented in this assessment due to the limited indoor use of 4-CPA and due to the limited environmental fate data. However, should additional uses for 4-CPA be considered EFED should be consulted to evaluate whether these uses may impact drinking water sources and what additional data may be needed for registration.